

REFAC 3618-79

10 JUL 1979

MEMORANDUM FOR: Deputy Director of Central Intelligence

FROM:

Chairman, Science and Technology Advisory Panel 25X1

SUBJECT: STAP Recommendations for CIA R&D Plans,  
Programs, and Budget, June 1979

In response to your request to STAP to examine CIA's Research and Development program a subgroup of STAP met with representatives of DDO, DDS&T, NFAC and the Comptroller's Office. STAP at its meeting of June 21 and 22 approved the report of the subgroup subject to the condition that the contacted offices be given an opportunity to comment on the final version. The report reflects these comments and the report is accompanied by the memos from the Comptroller's Office dissenting from one recommendation of STAP.

Signed

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## Attachments:

1. STAP Recomm. for CIA R&D Plans, Programs, and Budget, Jun79
2. [redacted], dtd 15Jun79 25X1
3. [redacted] dtd 27Jun79

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(10 July 79)

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STAP Recommendations  
for  
CIA R&D Plans, Programs, and Budget

On 29 March 1979 the DDCI requested that STAP review CIA's Research and Development program considering the current budgetary stringencies. A subgroup of the Panel met with officials of the DDS&T, NFAC, DDO and the Comptroller's office. STAP reviewed and revised a draft report during its meeting of 21 and 22 June; the Agency officials consulted contributed comments to the draft reports.

1. Annual Posture Statement of CIA's R&D Programs

At present CIA has no overall R&D strategy. For several years the DDS&T has prepared an R&D notebook that describes both individual and group (e.g., covert communications) projects. The notebook provides an excellent aid for annual evaluation, modification, and review of the Agency's individual R&D projects. However, there is no prepared annual statement that describes CIA's overall R&D program, its objectives and rationale. Without such a longer range planning document--which must include the identification of long-range intelligence objectives--it is difficult either to justify the existing R&D program or to select new R&D projects in any logical, rational fashion, except on the basis of extrapolating the past. Moreover, it is not possible within the existing framework to judge R&D progress toward specific Agency goals since these goals have not been specifically defined. Certain Agency R&D programs, i.e., those for NPIC and DDO operations' support, are well defined, including formal statements of reasonably long-term objectives. But, the absence of a comparable program description and rationale for intelligence collection and production makes it almost impossible to conduct Agency-wide R&D planning.

Recommendation: That an annual long-range R&D "posture statement" be prepared by the DDS&T, to include a description and rationale for the overall Agency program. Such a posture statement, analogous to that now prepared by DoD, should include a section on long-range intelligence problems by NFAC, the R&D needs of the other user offices, and a descriptive section on the purpose and status of major R&D programs. including

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those aimed at satisfying major Agency intelligence objectives, such as improved intelligence production or secure agent communications. Some attempt also should be made to provide a more integrated rationale for the various support-related R&D programs (e.g., for DDO, DDA, and NPIC) in terms of the Agency's overall intelligence objectives.

The prime purpose of the "posture statement" process is to provide management with a clear statement of the goals and rationale for particular programs. The statement can then be used to measure progress toward achievement of the goals, as well as provide an overview of the total R&D effort. The posture statement can aid in reducing overlap as well as identifying those programs that are mutually reinforcing.

In making this recommendation we recognize the efforts now under way to improve R&D management. These efforts should receive high-level management attention and be coordinated through the "posture statement" process we recommend.

## 2. NFAC's Role in Agency R&D Planning

The present R&D effort is driven mainly by current intelligence needs--basically, collection requirements and operational support needs. There currently is no formal Agency effort to identify long-range (beyond 2-3 years) intelligence problems that will require new collection or analytical means and as such would require R&D in order to satisfy those future intelligence needs. The need of an intelligence-derived future problem set is recognized by the DDS&T and the R&D users but there presently is no dedicated Agency-level effort for its formulation.

Recommendation: Within the NFAC, DDO, and DDS&T grouping, NFAC should play a lead role in establishing long-range functional intelligence needs that would require R&D support rather than having developments in collection technology drive the system. In fulfilling this role NFAC should establish a small but dedicated effort to develop, on a continuing basis, an intelligence "future" made up of the most important intelligence problems and objectives that the CIA might be expected to face over the next 3- to 10-year period. The primary objective of this effort would be long-range Agency planning. Such an effort could be handled by a

few project officers plus analytical contributions from the various NFAC offices and the other R&D consumers.

### 3. R&D Funding as a Separate Line Item with Multiple-Year R&D Funding Provision

*This subject and its recommendation is the only one in which there is a difference of opinion between STAP and Agency officials; the Office of the Comptroller has taken issue and has expressed its views in the attached memos. Upon due consideration, the STAP decided that the long-range value of multiple year funding for Agency R&D programs--particularly over the next decade--probably outweighed the bureaucratic problems and added accounting costs. Furthermore, the Agency's commitment to R&D is perceived by outside viewers as being closely linked to how well it sees its future intelligence needs--it would seem that a strong visible stand by the Agency on its R&D program and its funding would project an appropriate position.*

CIA R&D programs and projects are presently included as a part of CIA's overall budget. R&D funds are treated on the same one-year basis as all other Agency funding. The Agency apparently benefits substantially from the inherent flexibility in this single appropriation approach and R&D projects have been a major benefactor in the past. However, there are some liabilities to this approach--particularly the single-year funding feature--that are peculiar to longer range R&D projects and these are likely to be more prominent during periods of budget stringency. For example, handling the Agency's R&D budget on a single-year basis constantly places longer range R&D projects in jeopardy to fiscal and human fluctuations. Moreover, the planning and initiation of new long-range R&D projects in the face of such short-term budgeting tends to inhibit both Agency and outside contractor elements. It is not clear whether these liabilities outweigh the overall benefits gained from flexibility. There probably needs to be a new, current look at these features, by all the Agency components involved.

Recommendation: The Agency Comptroller should seek to have OMB treat Agency R&D funds as a separate multi-year appropriation or, if this is not possible, seek a formulation by which Agency R&D funds for large, long-range R&D projects can be budgeted on a multiple-year cycle along the same line as that used by elements of DoD. This approach should serve to both highlight important

R&D commitments over the long term and relieve internal pressures to further reduce an already sparse R&D effort as the result of R&D planning by residual allocation.

#### 4. The Need for a New Technology Acquisition Strategy for CIA

CIA has in the past had the capacity of stimulating new technology developments in the private sector, either by seeding important technical developments or through technical leadership from within--it no longer is able to do this effectively. Even "piggybacking" on other government (mainly DoD) R&D projects has become ineffective due mainly to high application costs for specific intelligence projects. The limited R&D budgets now available are not adequate to develop and procure the unique technology needed for the Agency's intelligence objectives. It appears the Agency's R&D budget has already dropped below the "more-with-less" level in terms of real dollars, and a more innovative approach coupled with realistic requests for more funds is in order.

Recommendation: The Agency (DDS&T) must consciously develop a new technology acquisition strategy, one recognizing the contemporary capabilities and limitations of CIA. Some form of a technology transfer strategy seems most appropriate (as opposed to past practices of seeding, Agency innovation, and outright funding). The establishment of a dedicated Agency effort to identify other government and private sector technology that can be applied to identified needs would be a first step. The Agency should actively follow such R&D efforts by other government organizations through the IR&DC. The use of high-level Agency access to the private sector as a means of maintaining currency in areas of technological interests should be systematically pursued. In addition, Agency management should seek to designate certain of its R&D projects as Community efforts (e.g., analytical techniques and collection efforts that satisfy DIA and Service needs as well as CIA's). In those cases provision should be made to pool all relevant IC R&D funds under the management of a designated lead agency.

#### 5. Multioffice and multidisciplinary R&D Projects

The need for new integrated intelligence processes (including collection, analysis, and production) required

to address "real world" multidimensional problems such as energy availability, materials scarcity, and food production, is recognized as one of growing importance. At present the R&D needs for such multidisciplinary intelligence projects are not well defined. Such projects [redacted] are complex and costly and although recognized as crucial in terms of satisfying real world consumer needs, they are not being given the high-level management attention (except on a personal or ad hoc basis) required to support and sustain the R&D effort necessary to bring such multidisciplinary intelligence processes on line. The fact that such new intelligence processes threaten existing analytical activities in one or more offices also tends to inhibit development or support by production units themselves. Neither a technology "push" nor an intelligence requirements "pull" by itself is sufficient to develop the appropriate new processes; furthermore, funds to develop new collection and processing technology against the expectation of future intelligence requirements no longer exist. Truly joint planning by both collector and producer is required to harmonize the separate R&D efforts aimed at new collection, processing, analysis, and production means. Presently no framework exists to plan and support such R&D projects. Top down planning and management are necessary to focus the appropriate R&D and production offices on important multidisciplinary intelligence problems.

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Recommendation: In order to optimize allocation of limited R&D funds, the Agency's upper management should selectively identify and support development of any major new multidisciplinary intelligence processes, particularly those requiring simultaneous R&D in collection, analysis, and production means. The CIA Executive Committee should look closely at such needs and related R&D projects, with the participation of appropriate CIA offices and R&D groups.

## 6. Production R&D

Production-related research and development, including both hardware and analytical means, to improve the quality of intelligence, continues to drift, with no clear set of long-range (3-10 year) objectives. The development of innovative analytical approaches, particularly those which integrate intelligence across different sources and disciplines/offices continues to have high standing in principle and low standing with respect to funds and high-level backing. Existing R&D resources are broken into numerous small projects which may provide technical staff support, but are incapable of substantially changing the quality of CIA's finished intelligence.

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Recommendation: NFAC should prepare a short list of major policy-issue consumer needs operative 5-15 years in the future which are not likely to be met adequately by current analytical and production approaches. If prepared properly, the list would identify upcoming production problems, particularly those which cut across or fall between the division of labor among analytical offices. Production R&D itself should concentrate on a small number of such problems through projects of 3 to 5 years duration. The choice of production R&D projects, data access determination, and project continuity should rest outside the jurisdiction of offices with strong commitments to current production approaches and divisions of analytic effort. The relationship between the future needs list and the small group of production-related R&D projects would be analogous to that of long-range corporate planning and a corporation's operating plan. A yearly review of both would be required to insure their currency and relevance to the Agency's intelligence objectives; a function that the Executive Committee might perform.

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27 JUN 1979

MEMORANDUM FOR: [REDACTED] 25X1  
Special Assistant, Physical Sciences and Technology Division,  
OSI

FROM : [REDACTED] 25X1  
Deputy Comptroller

SUBJECT : Comments on STAP Recommendations for CIA R&D Plans,  
Programs, and Budget, 25 June 1979 Draft [REDACTED] 25X1


1. We thank you for the opportunity to review the second draft of the Panel's paper. The only issue we would like to comment on is the R&D funding mechanism. Our case was presented in [REDACTED] note, but I would like to accentuate a few of the factors in the following paragraphs. [REDACTED] 25X1  
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2. The CIA R&D funding is not "presently 'submerged' in the single budget for CIA." Our 1980 presentation to Congress contained an 11 page RD&E schedule with an overview, a listing of 1978, 1979, and 1980 funds by structural category, by office, and by category within each office. It also includes an item-by-item description of major R&D products. Thus R&D is in essence a "line item." R&D is treated in even greater detail in presentations to Agency management, to Community management, and to OMB. If the Panel is asking that R&D be a separate "appropriation," then it would indeed have some added visibility, but the Agency would have substantially less flexibility. [REDACTED] 25X1

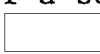
3. The advantage of providing a separate appropriation with multiple year funds is said by the Panel to "probably outweigh(ed) the bureaucratic problems and added accounting costs." These may only be bureaucratic difficulties to the Panel, but in trying to achieve objectives in the Washington community, they are very real to us. With the intense scrutiny being focused on the Agency from all sides, our flexibility to reprogram funds to meet unforeseen needs is a key capability. If R&D were established as a separate appropriation, three or four other items (such as personal services and procurement) would inevitably also be so designated. Such a move would introduce two to three month delays into our consideration

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of a number of issues which arise during the course of every fiscal year. More important, certain programmatic issues would inevitably be resolved on the basis of our need to accommodate to rigid accounting rules rather than program realities. 

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4. Clearly the Panel is right in describing the desirability of having multiyear funds to maintain a competent R&D program; however, the disadvantages of a separate appropriation would more than neutralize this desirability. 

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